

## METHOD AND SYSTEM FOR PROGRAMMING FPGAs ON

### PC-CARDS WITHOUT ADDITIONAL HARDWARE

#### Abstract

5 Method and circuit arrangements are provided for programming or updating hardware electronic circuits without manually accessing the circuits. The circuit arrangement includes an EEPROM device, a FPGA device which is accessible via a computer bus system and a MUX element connected between said devices. In the circuit arrangement, a PROM device is arranged for comprising control data for proper recognition of the FPGA by the bus system, and for comprising a logic usable for  
10 programming the EEPROM device with an EEPROM-FPGA interface like that of Joint Test Action Group (JTAG). The MUX element can be controlled to read data from either the PROM device, EEPROM device, or FPGA device, in order to properly connect the FPGA to the bus for reading data from the bus system and to initialize a configuration of the FPGA with the contents of the EEPROM. In the method of the present invention, the  
15 FPGA is used to program the EEPROM with the schema received from a disk. The MUX is switched to be able to read from the EEPROM and feed the developed schema therein into the FPGA. The PROM is used to deliver the information to the FPGA, which is necessary for the PC-card to be recognized by the BIOS on a first start-up.